

Colorado Department of Transportation
Structure Inspection and Inventory Report (English Units)

Highway Number (ON) 5D: 025A 1

Mile Post (ON)11: 155.898 mi

Bridge Key: H-17-BC Inspection Date: 12/15/2010 Sufficiency Rating: 62.6 FO

Rgn/Sectn 2E/2M:	24	Hist Signif 37:	3	UW Inspection Date 93B:	
Trans Region 2T:	01	Posting status 41:	A	SI Date 93C:	
County Code 3:	041	Service on/un 42A/B:	6 1	Bridge Cost 94:	\$ 399,513
EL PASO		Main Mat/Desgn 43A/B:	5 2	Roadway Cost 95:	\$ 39,951
Place Code 4:	00000	Appr Mat/Desgn 44A/B:	0 0	Total Cost 96:	\$ 599,269
non-city		Main Spans Unit 45:	2	Year of Cost Estimate 97:	2006
Rte.(On/Under)5A:	1	Approach Spans 46:	0	Brdr Brdg Code/% 98A/B:	
Signing Prefix 5B:	1	Horiz Clr 47:	54.0 ft	Border Bridge Number 99:	
Level of Service 5C:	1	Max Span 48:	92.0 ft	Defense Highway 100:	1
Directional Suffix 5E:	0	Str Length 49:	191.3 ft	Parallel Structure 101:	L
Feature Intersected 6:		Curb Wdth L/R 50A/B:	0.0 ft 0.0 ft	Direction of Traffic 102:	1
AIR FORCE ACADEMY RD 70		Width Curb to Curb 51:	54.0 ft	Temporary Structure 103:	
Facility Carried 7:		Width Out to Out 52:	58.0 ft	Highway System 104:	1
25 ML SBND		Deck Area:	11,097.6 sq. ft	Fed Lands Hiway 105:	0
Alias Str No.8A:		Min Clr Ovr Brdg 53:	99.99	Year Reconstructed 106:	0000
		Min Undrclr Ref 54A:	H	Deck Type 107:	1
Prll Str No. 8P		Min Undrclr 54B:	15.3 ft	Wearing Surface 108A:	6
H-17-BD		Min Lat Clrnce Ref R 55A:	H	Membrane 108B:	0
Location 9:		Min Lat Undrclr R 55B:	8.6 ft	Deck Protection 108C:	0
7.5 MI S OF EL PASO-DOUGL		Min Lat Undrclr L 56:	12.17000045	Truck ADT 109:	12 %
Max Clr 10:	99.99	Deck 58:	6	Trk Net 110:	1
BaseHiway Net12:	1	Super 59:	6	Pier Protection 111:	#
IrsinvRout 13A:	000000025A	Sub 60:	6	NBIS Length 112:	Y
IrssubRout No13B:	00	Channel/Protection 61:	N	Scour Critical 113:	N
Latitude 16:	39d 01' 32"	Culvert 62:	N	Scour Watch 113M:	0
Longitude 17:	104d 50' 06"	Oprrtg Rtg Method 63:	5 No rating	Future ADT 114:	56,021
Range18A:	67 W	Operating Rating 64:	56.0	Year of Future ADT 115:	2027
Township18B:	67	Inv Rtg Method 65:	5	CDOT Str Type 120A:	CPG
Section18C:	12	Inventory Rating 66:	13.0	CDOT Constr Type 120B:	0.
Detour Length 19:	0.0 mi	Asph/Fill Thick 66T:	004 "in"	Inspection Indic 122A:	
Toll Facility 20:	3	Str. Evaluation 67:	3	Inspection Trip 122AA:	
Custodian 21:	1	Deck Geometry 68:	6	Scheduling Status 122B:	
Owner 22:	1	Undrclr Vert/Hor 69:	5	Maintenance Patrol 123:	8
Functional Class 26:	11	Posting 70:	5	Expansion Dev/Type124:	P
Year Built 27:	1958	Waterway Adequacy 7:	N	Brdg Rail Type/Mod 125A/B:	W 0
Lanes on 28A:	3	Approach Alignment 72:	8	Posting Trucks 129A/B/C:	0 0 0
Lanes Under 28B:	6	Type of Work 75A:	33	Str Rating Date 130:	7/6/1998
ADT 29:	37,100	Work Done By 75B:	1	Special Equip 133:	-1
Year of ADT 30:	2007	Length of Improvment 76:	191.3 ft	Vert Clr N/E 134A/B/C:	X 99.99 0.00
Design Load 31:	5	Insp Team Indicator 90B:	RED TEAM	Vert Clr S/W 135A/B/C:	X 99.99 0.00
Apr Rdwy Width 32:	38.0 ft	Inspector Name 90C:	TERRYJ	Vertical Clr Date:	10/30/2002
Median 33:	1	Frequency 91:	24 months	Weight Limit Color: 139:	0
Skew 34:	0.00 °	FC Frequency 92A:	-1	Str Billing Type:	U
Structure Flared 35:	0	UW Frequency 92B:	-1	Userkey 1 - System:	ONSYS
Sfty Rail 36a/b/c/d:	1 1 1 1	SI Frequency 92C:	-1	Userkey 7-Update Indic:	
Rail ht36h:	35 "in"	FC Inspection Date 93A:			

Inspector Name: TERRYJ

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Element Inspection Report

Elm/En	Description	Units	Total Qty	% in 1	CS 1	% in 2	CS 2	% in 3	CS 3	% in 4	CS 4	% in 5	CS 5
14/1	P Conc Deck/AC Ovly	(SF)	11,097	100 %	11,097	0 %	0	0 %	0	0 %	0	0 %	0
109/1	P/S Conc Open Girder	(LF)	1,840	99 %	1,830	1 %	10	0 %	0	0 %	0	0 %	0
205/1	R/Conc Column	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
215/1	R/Conc Abutment	(LF)	116	100 %	116	0 %	0	0 %	0	0 %	0	0 %	0
234/1	R/Conc Cap	(LF)	58	55 %	32	43 %	25	2 %	1	0 %	0	0 %	0
301/1	Pourable Joint Seal	(LF)	170	85 %	144	11 %	18	5 %	8	0 %	0	0 %	0
311/1	Moveable Bearing	(EA)	20	100 %	20	0 %	0	0 %	0	0 %	0	0 %	0
313/1	Fixed Bearing	(EA)	20	95 %	19	5 %	1	0 %	0	0 %	0	0 %	0
321/1	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
325/1	Slope Prot/Berms	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
326/1	Bridge Wingwalls	(EA)	4	100 %	4	0 %	0	0 %	0	0 %	0	0 %	0
334/1	Metal Rail Coated	(LF)	382	100 %	382	0 %	0	0 %	0	0 %	0	0 %	0
338/1	Conc Curbs/SW	(LF)	382	92 %	351	7 %	25	2 %	6	0 %	0	0 %	0
342/1	Sign Attachment	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
359/1	Soffit Smart Flag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
362/1	Traf Impact SmFlag	(EA)	30	100 %	30	0 %	0	0 %	0	0 %	0	0 %	0
386/1	Appr Slab Slope Prot	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Elem/Env	Description	Element Notes
14/1	P Conc Deck/AC Ovly	3-4 inches of asphalt. Recent waterproofing membrane project (see plans in structure folder). Worn in wheel lines in both lanes.
109/1	P/S Conc Open Girder	Previous impact from left side to all but 1I-1J and have been patched and repaired (PHOTO 1/09). Girders 2H-2J have small chips. Diaphragm #0 in Bay 1A is spalled up to 5 inches deep with exposed rebar (see 12/10 photo).
205/1	R/Conc Column	Look good.
215/1	R/Conc Abutment	Moderate to heavy waterstaining, rust staining at A1. Few light vertical cracks in backwalls and face of caps. Left side of A1 has up to 14 inches of fill on abutment seat. A4 under girder B has minor spall in seat corner.

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234/1	R/Conc Cap	Moderate waterstaining both piers both faces. Spots of light scale. Several areas of delam. due to insufficient concrete cover. P2 minor spall at right end rear face of cap with exposed rebar. Light vertical crack with efflor below Bay 2H. Some horiz delam cracks below Bays 2A & 2D, and along bottom face below Bay D.
301/1	Pourable Joint Seal	Between approach slabs and abutments. With new overlay appear to be sealed, but have leaked in past. Asphaltic plug expansion device (306) replaced with pourable seal between 1/09 and 12/10 inspections. At P2. Fallen out majority of the length in MLs, and failed in ML #2 (8 LF) (see 12/10 photo).
311/1	Moveable Bearing	At Pier 2. Light R1 corrosion on all. Bearing 2E for Span 2 has a welded angle attached to both sides of the sole plate and bearing, unknown why this was welded here.
313/1	Fixed Bearing	Light R1 corrosion on all. Bearings at abutments on left side have fill collecting on them due to steep wingwall slopes directing water from deck back towards bridge. Bearings 1A-1B have R2 corrosion. Bearing 3A is buried in 14 inches of sand. Bearing 3E has a welded angle attached to both sides of the sole plate and ped. bar, unknown why this was welded here (see photo 1/09).
321/1	R/Conc Approach Slab	Covered with new overlay to match bridge deck.
325/1	Slope Prot/Berms	Dirt slopes at both abutments. Steep slopes at both left wingwalls cause fill from roadway to collect on left side of both abutment seats. Few shallow rivulets at right side of #1 slope.
326/1	Bridge Wingwalls	U-Type abutment wings. Looks good.
334/1	Metal Rail Coated	Galvanized Type Y rail.
338/1	Conc Curbs/SW	Light vertical cracks in gutter faces. Also some light scale on face of both. Debris collects left side at shoulders over abutments. Left side has some minor spalls on backsides with exposed stirrups due to insufficient concrete cover. At right side forward of conc pedestal for light pole, a 6 foot long crack with spall (see 1/09 photo).
342/1	Sign Attachment	Bridge mounted sign attached above Span 2 on the right. Some R1 corr in random spots. Apparent crack on middle support was discovered to be filler material placed on top of rusted section (see 12/10 photo).

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359/1	Soffit Smart Flag	Some light scale in Span 1 near midspan. Some map cracking with efflor and minor spalling near A1 in most bays, and in Span 2 near P2. Few trans. and longit. cracks with efflor., Bays 1H near A1 & 2I have some short stalactites.
362/1	Traf Impact SmFlag	Impact by backhoe on tractor trailer on 10/18/00, TAM provided description of damage that same day. JA wrote letter 3/27/08 to Region 2 requesting patching of spalled girders because the exposed reinforcing was severed or bent. Impact 10/18/00, Inspection 10/30/02, Report 3/27/08. All damaged girders have been patched with concrete as of 1/09 inspection (see 1/09 photos).
386/1	Appr Slab Slope Prot	Erosion troughs in abutment slopes were filled in prior to 2004 inspection.

Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
353.08	Br Dk Rpr Seal cracks in asphalt surface.	11/15/2006	-1	2010	300

357.01	Bearings Remove sand that is built up around Bearing A at Abutment #3, and Lt. end of A1.	10/30/2002	-1	2010	100
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364.01	Exp Jts Repair pourable seal that has failed and fallen out in MLs (see 12/10 photo).	12/15/2010		2012	2000
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Bridge Notes

Utilities: 1 small electrical conduit on each side of bridge.

Inspection Notes

Temperature: 66 F
Time: 10:30-11:35
Weather: windy, sunny
Team leader: TAT

Scope:

NBI: Element: Underwater: Fracture Critical: Other: Type: Regular NBI

Inspector: TERRYJ

Inspection Team:

Inspection Date: 12/15/2010

Inspector

Inspector